
PRI installation: XT, 71

PRI circuit card locations

Each PRI circuit card requires two adjacent slots on a shelf. As many as five circuit cards can be plugged into an empty network shelf, along with the power converter card, depending on the shelf type. See [Tables 49 and 50](#) for card slot positions.

Cable requirements

Shielded 22 AWG (0.644 mm) cable is recommended for connecting the PRI to the cross-connect point. This cable consists of two shielded twisted-pair conductors and two shields.

The transmit and the receive pairs must be individually shielded and enclosed in a polyvinyl jacket. This type of cable is commonly referred to as “6-conductor” cable. T1 cable shielding should be grounded at the cross-connect point.

To manufacture cables of different lengths than the standard cables provided, refer to [“PRI cabling information” on page 169](#).

See [Figures 18 and 19](#) for cabling arrangements with and without an Echo Cancellor.

Installing the QPC720 PRI

This procedure describes how to install the QPC720 PRI card in an XT, 71.

Procedure 8**Installing the QPC720 PRI in an XT, 71**

- 1 Determine the cabinet and shelf location of the circuit card to be installed. The following slots can be used if they are not required for other cards.

Table 14**Shelf and slot location of QPC720 in XN, XT, and option 71**

System	Shelf	Slot
XN/XT	QSD39 Network (LH)	5–10 Note 1
	QSD40 Network (RH)	5–10 Notes 1, 2
	QSD39 DTI/PRI only	2–10 Notes 1, 3 12–14
	QSD40 DTI/PRI only	2–3 Note 1 5–13
	NT7D44 Mass Storage QCA 55/58 CAB	2–8 Notes 1, 4
	NT7D45 Mass Storage QCA 23/24 CAB	5–10 Notes 1, 4
71	NT8D35 CPU/NET	5–10 Note 1 13–14
	NT8D35 DTI Exp Cube	2–3 Note 1 5–14
	NT8D47 RPE Cube	1, 11, 12
Note 1: DTI/PRI packs require two slots. The slot indicated is the maximum slot that the pack resides in. For example, in slot 14, the pack uses slots 13 and 14. Note 2: A DTI/PRI pack cannot be installed in slot 11. The pack would come in contact with the BTU installed between slots 11 and 12. Note 3: A DTI/PRI pack could reside in slots 10 and 11, but cannot reside in slots 11 and 12 because of powering restrictions. Note 4: The power regulator (NT6D81AA) can be substituted by the DTI/PRI packs, provided the balance of equipment in card slots 1 through 8 are already equipped.		

- 2 Unpack and inspect circuit cards.
- 3 Set option switches on the PRI circuit card. See [Figure 20](#) and [Table 15](#).

- 4 Install PRI circuit card in the assigned shelf and slot.
- 5 Install network circuit card (if no network loop connection is available).
- 6 If required, install I/O adapters in I/O panel.
- 7 Run and connect the PRI cables. Figures 18 and 19 show the XT, 71 PRI cabling. Refer also to Table 16.
Note: No additional cabling is required for multiple PRIs. The D-channel is associated through software in LD 17, prompt PRI.
- 8 If required, install connecting blocks at MDF or wall-mounted cross-connect terminal.
- 9 If required, designate connecting blocks at MDF or wall-mounted cross-connect terminal.
- 10 If required, install CSU or Echo Canceller.
- 11 Cross-connect PRI circuits.
- 12 Add related office data into system memory. Refer to the work order.
- 13 Run PRI verification tests

Figure 18
XT, 71 cabling without Echo Cancellor

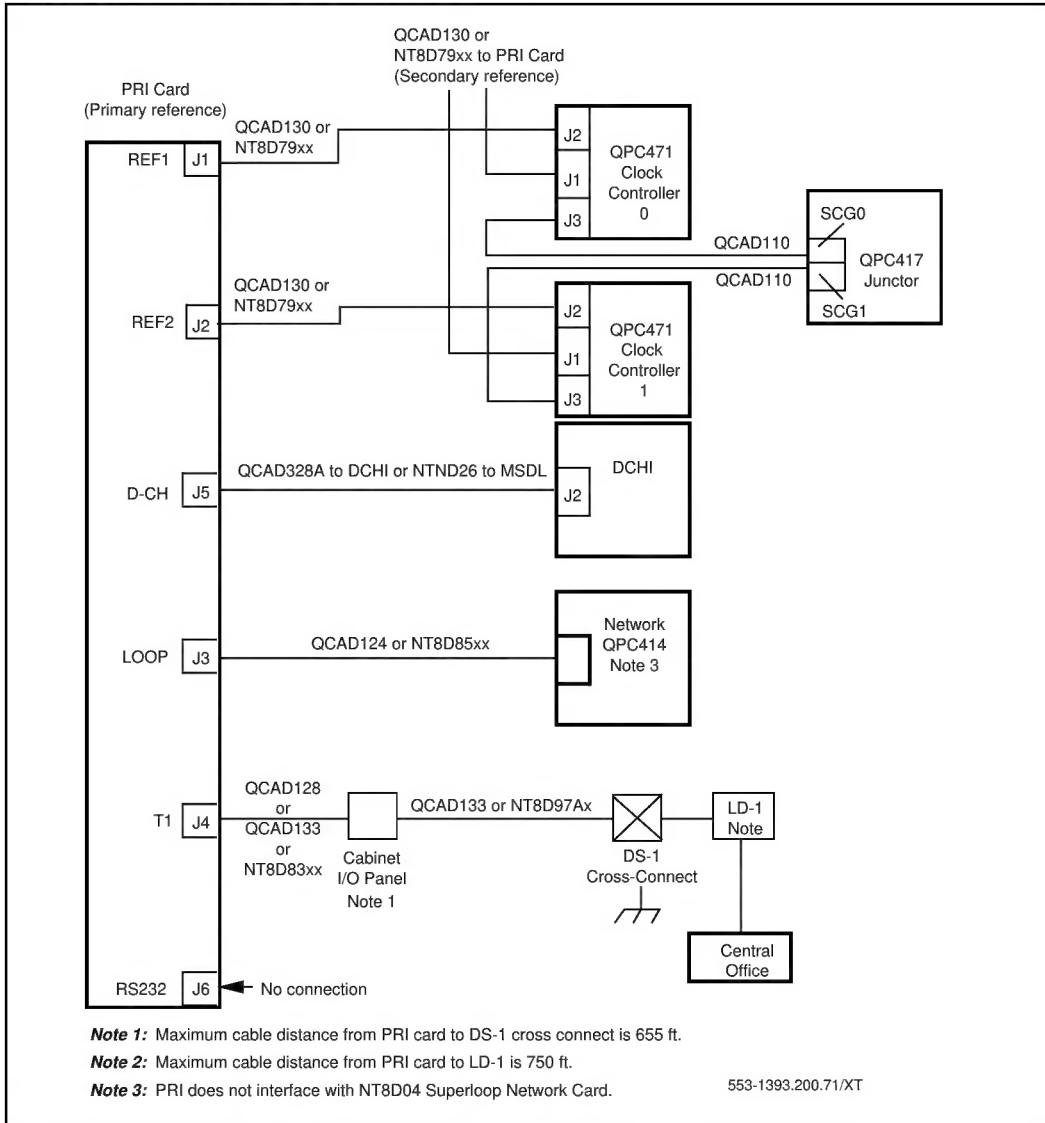


Figure 19
XT, 71 cabling with Echo Cancellor

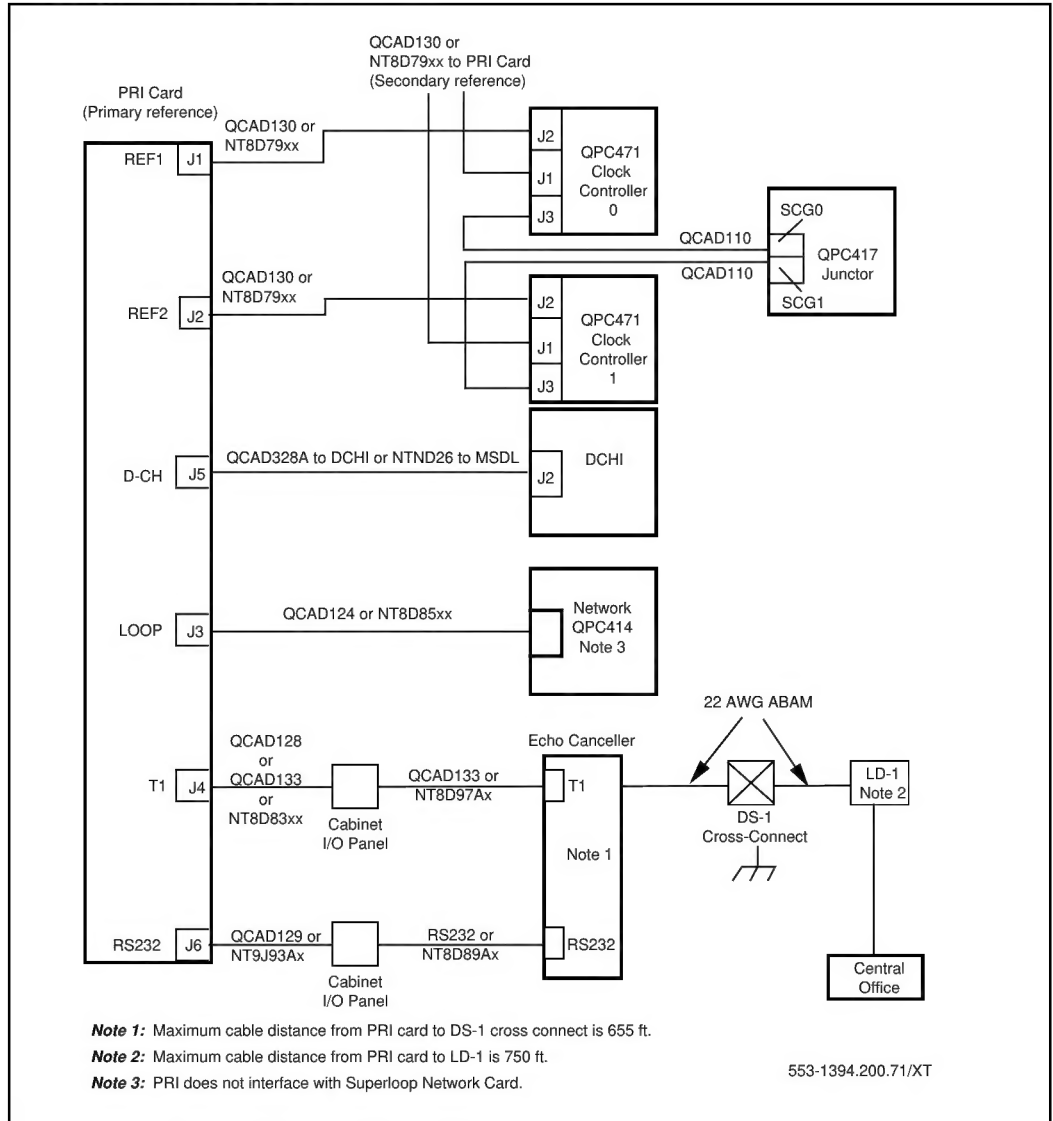


Figure 20
Option switch settings for PRI circuit card

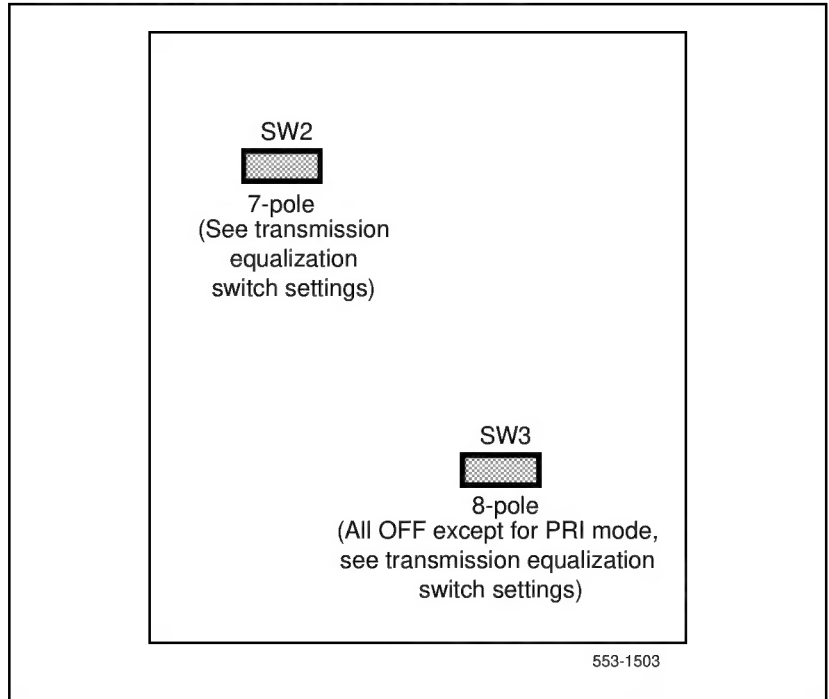


Table 15
Transmission equalization switch settings for PRI

Switch S2 settings	To repeated facility	To cross-connect point
5 on	0–45 m (0–150 ft)	0–30 m (0–100 ft)
2, 4, 6 on	46–135 m (151–450 ft)	31–100 m (101–355 ft)
1, 3, 7 on	136–225 m (451–750 ft)	101–200 m (356–655 ft)
Switch 3 option for DTI with ESF SW3–1 on = extended superframe format (ESF) off = superframe format (SF)		
Note 1: All positions on S2 (location B22) are OFF except as shown under the column labeled “Switch S2 settings.” Note 2: The switch 3 option for DTI with ESF applies to only X11 release 16, 17, and 18. All other positions on the 8-pole SW3 (location E37) should be OFF. Note 3: Prior to X11 release 19 (releases 16, 17, and 18), you must set the framing format as ESF with the DLOP prompt in LD 17 before you set SW3–1 on the card for the DTI with ESF option. Note 4: Beginning with X11 release 19, framing format, line encoding, and method of yellow alarm are selectable for both DTI and PRI in LD 17 with the DLOP, LCMT, and YALM prompts. All SW3 switch positions should be OFF.		

Table 16
Cable connections and destinations for XT, 71 (Part 1 of 2)

Cable	From	Des.	Con.	To	Des.	Con.	Notes
QCAD130 NT8D79xx	QPC720			J1	QPC471QC P775	CC-0 1	
QCAD130 NT8D79xx	QPC720			J1	QPC471 QCP775	CC-0 2	
QCAD130 NT8D79xx	QPC720			J2	QPC471 QCP775	CC-1 1	
QCAD130 NT8D79xx	QPC720			J2	QPC471 QCP775	CC-1 2	
QCAD110 NT8D74xx	QPC471 QCP775	CC-0	J3	QPC417	JCTR	J11 3	
QCAD110 NT8D74xx	QPC471 QCP775	CC-1	J3	QPC417	JCTR	J12	
QCAD124 NT8D85xx	QPC720		J3	Network			4
QCAD328A	QPC720		J5	QPC757		J2 5	
NTND26	QPC720		J5	NT6D80			X11 release 18 and later
QCAD128 NT8D83xx	QPC720		J4	I/O Panel			6
QCAD133 NT8D97Ax	I/O Panel			Patch Panel			6
QCAD129 NT9J93xx	QPC720		J6	I/O Panel			6

Table 16
Cable connections and destinations for XT, 71 (Part 2 of 2)

Cable	From	Des.	Con.	To	Des.	Con.	Notes
RS-232	I/O Panel			Echo Cancellor			
RS-232	QPC720		J6	Echo Cancellor		7	
QCAD133 NT8D83xx	QPC720		J4	Patch Panel		7	
RS-232	QPC720		J6	Echo Cancellor		7	
Note 1: Only when primary clock source. Note 2: Only when secondary clock source. Note 3: Multi-group junctor board connection. Note 4: Run to connector on network pack. Note 5: Run directly to DCHI card. Note 6: Run by means of cabinet I/O panel to CSU, Echo Cancellor, or cross-connect terminal. Note 7: Run by means of cabinet I/O panel to cross-connect terminal or Echo Cancellor from non-shielded system.							

Removing the QPC720 PRI

The following procedure explains how to remove the PRI card from the XT, 71.

Procedure 9

Removing the QPC720 PRI from XT, 71

- 1 Disable the D-channel in LD 96.
- 2 Disable Network Loop using LD 60. The command is DISL x.
- 3 If the circuit card is being completely removed, not replaced, remove data from memory. See *ISDN Primary Rate Interface description and administration* (553-2901-100).
- 4 Determine the location of the circuit cards to be removed.
- 5 Remove cross connections at MDF to wall-mounted cross-connect terminal.
- 6 Disconnect PRI cables at Echo Cancellor and at carrier interface (for example, Office Repeater and NCTE equipment).
- 7 Tag and disconnect cables from card. Rearrange Clock Controller card cables if required. This will affect call processing on DTI/PRI loops.
- 8 Remove PRI and network circuit cards. If the other circuit of a dual network card is in use, DO NOT remove the network card.
- 9 Pack and store circuit card.